

**BASE, PAYLOAD AND CONNECTING STRUCTURE
AND METHODS OF MAKING THE SAME**

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ABSTRACT

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Micromachined passive alignment assemblies and methods of using and making the same are provided. The alignment assemblies are used to align at least one optical element. The alignment assemblies may be configured with kinematic, pseudo-kinematic, redundant or degenerate support structures. One alignment assembly comprises a base and a payload, which supports at least one optical element.

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The payload may be coupled to the base via connecting structures. The base, the payload and/or the connecting structures may have internal flexure assemblies for preloading a connection, thermal compensation and/or strain isolation.